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(54) METHOD FOR INTERLOCKING CHANNEL USING MULTI-SERVER IN PUSH SYSTEM

Abstract

Machine Translation | Human Translation

1 1. The technical Field of the Invention which is written in claim. In the push system, the present invention is the thing about the channel interlocking method utilizing the multi server. 2. The technical task which an invention tries to solve. In the dispersed multi server platform, the present invention tries to provide the computerlegiable medium recording the channel interlocking method for providing the environment which receives the information in which users are the same while maintaining the same channel in each server and the program for realizing that. 3. The gist of the solution of an invention. The first step, the second step watching the message queue, and the third step are included. As to the first step, the present invention appoints the push server in which the channel variation is generated among the regionally independent multi push server as the provisional master push server, and assigning rest push servers to the provisional slave push server. As to the second step, the provisional master push server is generated as the provisional slave push server. The third step the provisional master push server continuously transmits the message Naming Alt with the provisional slave push server according to the monitoring result of the second step in the message queue, and in that

way connects a channel between the multi push server. 4. The important use of an invention. The present invention is used for the push system etc.

Machine Translation | Human Translation

PURPOSE: A channel linking method using a multi-server in a push system is provided to make users get same information, keeping the same channel for each server in distributed multi-server environment.

CONSTITUTION: A channel linking method consists of three steps. At the first step, among independent multi-push servers, the push server that the channel was changed becomes the temporary master push server, and other servers become temporary slave push servers. At the second step, the temporary master push server watches the generated message queues. At the third step, according to the result of the watch, the temporary master push server transmits the messages that remains in the message queue to the temporary slave push servers, and so, the channels between multi-push servers are linked.

Representative Drawing(s)

Fig. 2

Keyword(s)

The multi server, push server, master server, slave server, timer.

Description

Brief Explanation of the Drawing(s)

2 Fig. 1 is an illustrative view showing the channel interlocking method using the multi server of the push system.

3 Fig. 2 is one preferred embodiment flowchart about the channel interlocking method using the multi server of the push system according to the present invention.

4 * The description of reference numerals of the main elements in drawings.

5 Or 11 14: web server 15: server control system.

6 16:push server(provisional master server)

7 Or 17 19:push server(provisional slave server)

Details of the Invention

Purpose of the Invention

The Technical Field to which the Invention Belongs and the Prior Art in that Field

8 The present invention relates to the computerlegiable medium which mutually works a channel on the multi server in the push system which automatically transmits the information and records the channel interlocking method in which all users use the

multi server sharing a channel and the program for realizing that.

9 Particularly, the present invention relates to the computerlegiable medium which in order that accommodates as the channel which is the same in the server of the different part provides, it temporarily appoints the server in which the channel variation is generated as the primary server and the server temporarily decides on the rest server to the slave server and a channel is connected between a server, and in that way records the channel interlocking method utilizing the multi server which altogether makes have the common channel and the program for realizing that.

10 Generally, in case the large-scale user is distributed in the different region, It is difficult for the push service consisting of the single server to cope with the capacity and network traffic of the hardware etc.

11 Therefore, conventional push systems had been building the mode, solved with the single server independent about the small scale personnel the mode which did the capacity of a server about the large-scale personnel to the large size and solved, and the mode which was the small server but continually set up the different part in a center and shared the hard disk and the mode which served the large-scale personnel with the web server and the system putting the application server and dispersively arranged the database (DB) server with a different shops of a large as long as the mode were very much used in the web method.

12 But the push service consisting of the conventional single server has the problem that the computation failure is induced due to the centralization of the limit of the capacity of the hardware and recipient and network traffic in case the large-scale user is distributed in the different region.

Technical Challenges of the Invention

13 Is to resolve the above problems worked out. And it are an object of the present invention to provide the computerlegiable medium recording the channel interlocking method for providing the environment which receives the information in which users are the same while maintaining the same channel in the dispersed multi server platform in each server and the program for realizing that.

◦ Structure & Operation of the Invention

14 An object is accomplished. And the present invention is to be equipped with the third step which appoints the push server in which the channel variation is generated among the regionally independent multi push server as the provisional master push server, and the provisional master push server continuously transmits the message Naming Alt with the provisional slave push server according to the monitoring result of the second step and the first step: second step: watching the message queue in which the provisional master push server is generated as the provisional slave push server in the message queue, and in that way assigns rest push servers to the provisional slave push server connects a channel between the multi push server.

15 Moreover, the present invention is to provide the computerlegiable medium which appoints the push server in which the channel variation is generated among the regionally independent multi push server as the provisional master push server in the push system equipped with a processor, and the provisional master push server continuously transmits the message Naming Alt with the provisional slave push server according to the monitoring result of the second step and the function: function: of watching the message queue in which the provisional master push server is generated as the provisional slave push server in the message queue, and in that way of assigning rest push servers to the provisional slave push server records the program for realizing the function of connecting a channel between the multi push server.

16 In order to accommodate as the channel which is the same in the server of the different part provides, it uses the channel coupling between a server. It temporarily serves to the server in which the channel coupling in which the present invention is always not one server the master server is generated of the primary server and it temporarily serves of the slave server and it altogether makes the rest server have the common channel.

17 Therefore, as to the présent invention, while mutually working the channel putting the respective application and data in the regionally independent multi server and serves as in the push system with directory, it takes the mode which all push servers show like the identical server. In that way it can do registered channels without the need to connect to the other push server with option and it can solve the network traffic concentrationed.

18 The above-described object, and the features and advantage are evident than the detailed description relating with the attached drawing. Hereinafter, referring to the attached figure, one preferred embodiment is circumstantially illustrated.

19 It is the mode which provides the integrated service by being automatically registered in each server even if it makes the common channel in one server, to says to be the channel interlocking teeth presented in the present invention. That is, in case of to registering the channel which it commonly uses within a population if an administrator connects to the push server which oneself manages and an administrator registers the common channel, an administrator interior manages the address of the other push server in which the corresponding push server is installed within a population and it delivers the common channel registration function to the other server and an administrator holds data in which all servers are common in common.

20 Fig. 1 shows case, it deletes the channel which an administrator uses in the multi server platform with the registration / correction / it is the illustrative view showing the channel interlocking method using the multi server of the push system.

21 Firstly the server operator makes accompany the server control system (15) and it connects to the region push server 1 (16). At this time, data transmission module of the push server 1 (16) has message queues as the number of the other servers to communicate. And messages to have to send to each server are stored in each message queue. Each server information is registered and managed in the server control system (15). And it is a server or if the channel correction is generated in the push server 1 (16), it performs the role of the provisional master server in the registered multi server platform.

22 The server control system (15) produces the message corresponding to the channel operation command and it delivers to the corresponding area push server 1 (16). It construes the content of a message and it modifies the channel related information and the push server 1 (16) receiving a message downloads channel related information from the region web server (11).

23 The push server 1 (16) finishing a task transmits a packet in order to inform the push server 2,3,4 positioned in the local headquarters, and (17,18,19) of the change of the common channel. At this time, push server 2,3, 4s (17,18,19) receiving a message provisionally perform the role of the slave server.

24 Here, if the slave server receives the order message from the master server, it informs to the master server that the message receipt was successfully performed and it construes the content of the order message and it modifies the content of a server and channel information according to a command. Of course, in the other push server 2,3, 4s (17,18,19) is the corresponding server, the role of the provisional master server is performed if the change of a channel occurs. Moreover, data transmission module of the provisional master server watches the message queue of the magnetism server made as the number n of the slave server and if a message Nams Alt, it transmits the message (Send, m id, #of Group, Group 1, Group n, message length, Massage) which is in the message queue with the slave push server in the message queue according to an order. At this time, if the signal that the signal was received in the time which operated a timer while reporting a message and was designated is not received "ACK(acknowledge)", the corresponding message is retransmited in the provisional master server.

25 On the other hand, the proper processing about the message received in the side receiving a message has to be administered. The receive module transmits a signal if it receives a message "ACK". Whether it is the message which it already received or not confirms and if it is the message which freshly arrives, the message number of the message arriving with final is renewed and a message is translated and it processes.

26 As to the master server, until messages which are in the message queue are altogether processed, it continuously has to continuously the circulation work. The slave server performs a re-work by a timer although it has the down or the other failure. Moreover, in the master server, the task it reads the log file in case the failure like the blackout lamp occurs among the electrical

transmission and which verifies the last processing state and which it previously performs is continuously performed.

27 The service subscriber becomes the environment connecting to the push server in which oneself is registered and joins the new channel and receives the information. That is, as to data transmit and receive between the slave server and the master server, the mechanism which it can retransmit although a message is Do JungE lost with electrical transmission since the suitable reliability is required is diverted.

28 Fig. 2 is one preferred embodiment flowchart of the channel interlocking method that in the push system, the multi server is utilized.

29 As shown in
Fig. 2, in the push system, firstly if the server operator makes accompany the server control system (15) (201) and the channel interlocking method utilizing the multi server connects to the push server 1 (provisional master server) (16), in order to delete a channel from the push server 1 (16) with the registration / correction / and inform push server 2,3, 4 (provisional slave server) (17,18,19) positioned in the local headquarters of the change of the common channel, a packet is transmitted (202). That is, if data transmission module of the provisional master server watches the message queue of the magnetism server made as the number n of the provisional slave server and a message Nams Alt in the message queue, it transmits the message having in the message queue with the provisional slave server according to an order.

30 Thereafter, push server 2,3, 4s (17,18,19) Jeoning SongBat a packet construe the content of the order message and it modifies the content of a server and channel information according to a command (203).

31 And push server 2,3, 4s (17,18,19) analyze the transmission result of the transmitted message from the push server 1 (16) (204). It informs the transmission fail result in the transmission fail by the push server 1 (16) and the push server 1 (16) retransmits the corresponding message (Send, m id, #of Group, Group 1, Group n, message length, Massage) to push server 2,3, 4s (17,18,19) according to the operation of a timer (205). That is, if the signal the push server 1 (16) operated a timer while sending a message and that the signal was received from push server 2,3, 4s (17,18,19) in the designated time is not received "ACK", it retransmits the corresponding message.

32 "ACK" signal is informed with the push server 1 (102) in the transmission pass (206). At this time, in the push server 1 (16), the reception whether or not of the message (ACK, m id) received from push server 2,3, 4s (17,18,19) is judged (207).

33 As a result of the above judgement, if "ACK" signal is not received from push server 2,3, 4s (17,18,19), the corresponding message (Send, m id, #of Group, Group 1, Group n, message length, Massage) is retransmited to push server 2,3, 4s (17,18,19) according to the operation of a timer (205).

34 As a result of the above judgement, if "ACK" signal about the corresponding message is received from push server 2,3, 4s (17,18,19), after the corresponding message is deleted from the message queue (n) (208), the push server 1 (16) transmits the message of a n with the same push server 2,3, 4s (17,18,19) of a number stored in the message queue in the same manner as describing in the above (209). At this time, each push server 2,3, 4 (17,18,19) transmits the received result (ACK) about each message with the push server 1 (16). It confirms whether it is the message which it already received and or not if it is the message which freshly arrives, it renews the message number of the message arriving with final and it translates and processes a message.

35 As described in the above, as to the push server 1 (16) which is the master server, until messages stored in the message queue are altogether processed, it continuously has to continuously the circulation work. The push server 2,3,4 which is the slave server, and (17,18,19) perform a re-work by a timer in the case due to the down or the other failure. Moreover, in the master server, the task it reads the log file in case the failure like the blackout lamp is generated in the during transfer and which verifies the last processing state and which it previously performs is continuously performed.

36 Therefore, as to the present invention, although the channel variation was not generated in the server in which oneself belonged, it connects to the push server in which oneself is registered to the service subscriber and it joins the new channel and the server receives the information.

37 The present invention described in the above is not restricted to the above-described embodiment and the attached drawing, but it has to a person skilled in the art and it will be clear in the technical field in which the present invention belongs that many substitution, and the deformation and change are possible in the range that does not do not depart from the technical mapping.

• Effects of the Invention

38 It describes in the above. And the present invention has the effect that in the push system, the channel serving with directory mutually is worked. In that way it can look like the identical server and all servers can do registered channels with option and the network traffic concentrationed can be suppressed in comparision with the single server. The communications traffic by the great quantity of the information transfer can reduce the load. And the consistent information according to the ream co-channel can be provided been between a server.

❶ Scope of Claims

Claim[1] :

39 A channel interlocking method comprising the steps of: as to the channel interlocking method for being applied to the push system, the push server in which the channel variation is generated among the regionally independent multi push server is appointed as the provisional master push server; the provisional master push server continuously transmitting the message which Nams Alt with the provisional slave push server according to the monitoring result of the second step and the first step: second step: which watches the message queue in which the provisional master push server is generated as the provisional slave push server in the message queue assigns rest push servers to the provisional slave push server; and in the push system which connects a channel between the multi push server and being made including the third step, the multi server is utilized.

Claim[2] :

44 The channel interlocking method using the multi server of the push system of claim 1, wherein an administrator connects to the push server and an administrator registers the common channel in case of to registering the channel which the first step commonly uses within a population; it interior manages the address of the other push server in which the corresponding push server is installed within a population and it delivers the common channel registration function to the other push server and it holds data in which all push servers are common in common; it appoints the push server in which the channel variation is generated among the multi push server as the provisional master push server; and an administrator assigns rest push servers to the provisional slave push server.

Claim[3] :

47 The channel interlocking method which the fourth stage: provisional slave push server transmitting a message with the provisional slave push server according to an order construes the content of the order message and it modifies the content of a server and channel information according to a command; as a result of the above judgement, the positive response (ACK) signal is not received of the analyzed result of the fifth step, the fifth step, analyzing the transmission result of a message the analyzed result of the fifth step, the sixth step informing the transmission fail result in the transmission fail by the provisional master push server and in which the provisional master push server retransmits the corresponding message to the provisional slave push server according to the operation of a timer, and the seventh step, the seventh step informing the positive response (ACK) signal with the provisional master push server in the transmission pass and judges the reception whether or not of the message (ACK, m id) received in the provisional master push server from the provisional slave server; as a result of the above judgement, the positive response (ACK) signal about the corresponding message is received of the eighth step retransmiting the corresponding message to the provisional slave server according to the operation of a timer and the seventh step from the provisional slave server; it deletes the corresponding message from the message queue (n); and uses the multi server of the push system which goes over to the fourth stage and is made including the ninth step of claim 1 or 2, wherein in the third step,

the provisional master push server watches the message queue according to the monitoring result of the second step and a message Nams Alt in the message queue; and a message has in the message queue.

Claim[4] :

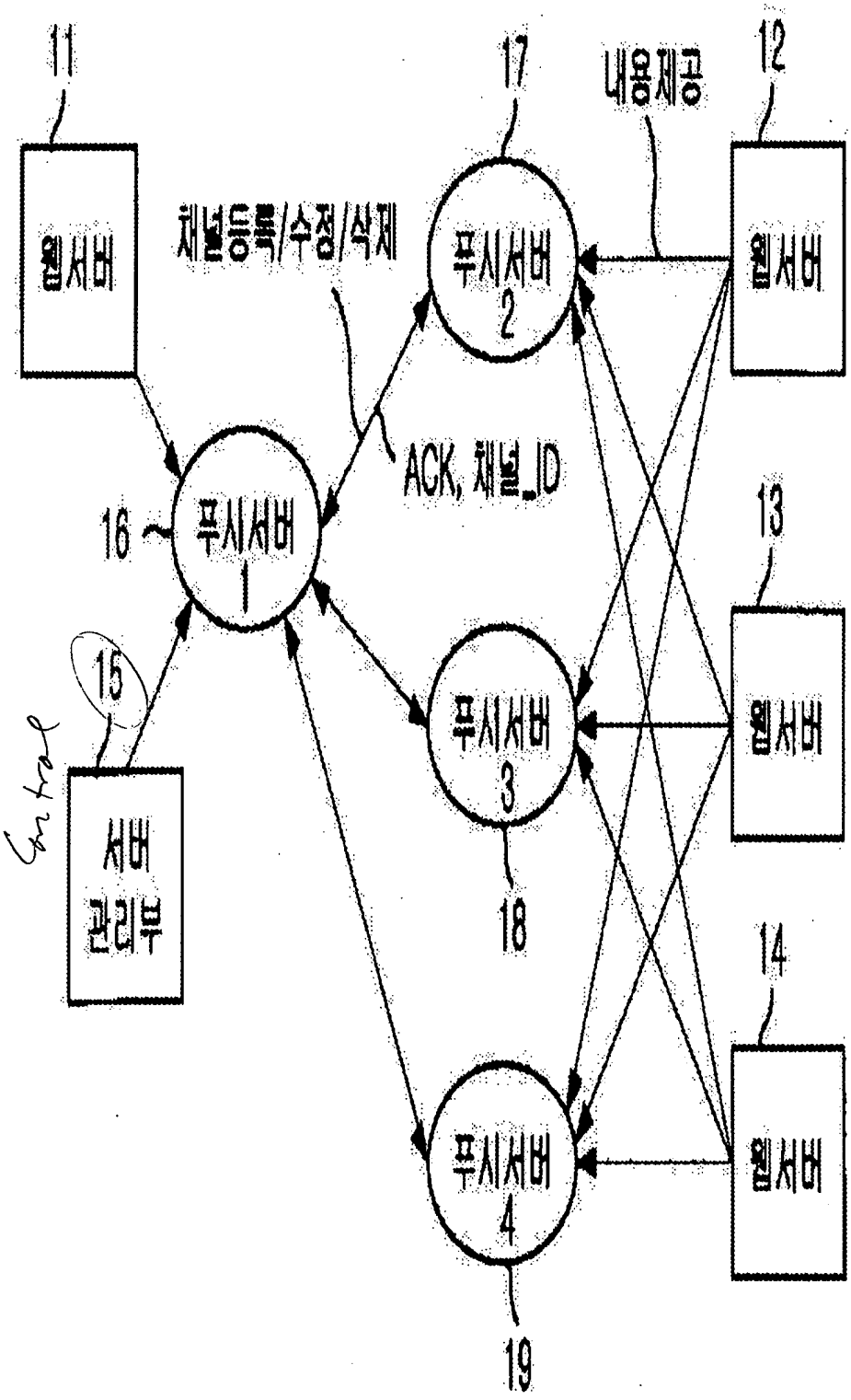
56 The channel interlocking method using the multi server of the push system of claim 3, wherein each push server provisionally serves of the provisional master push server in order to send a message; and it is provisionally the dynamic push server serving of the provisional slave push server in order to receive a message.

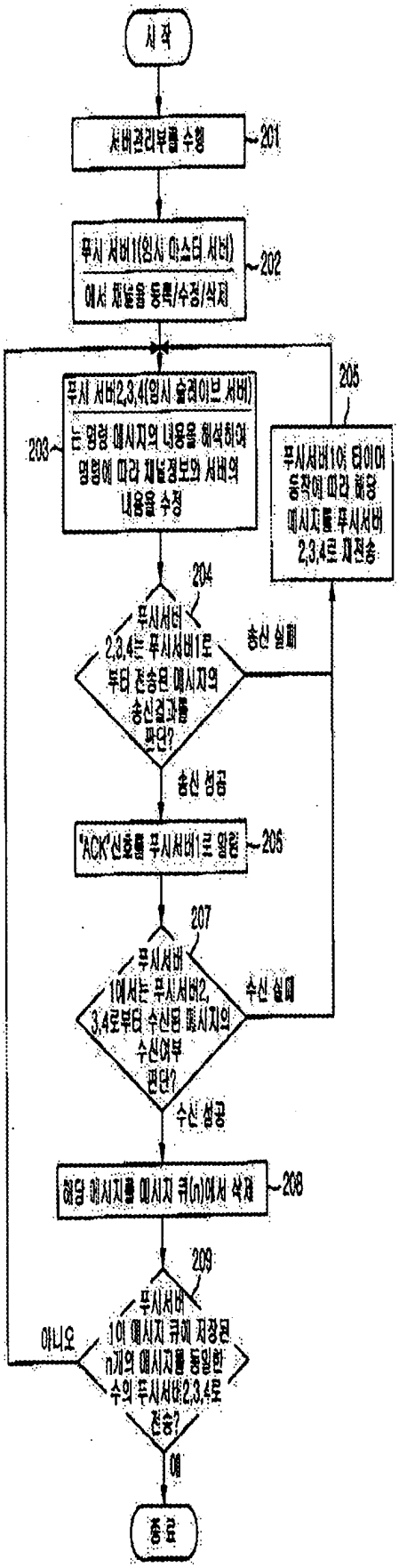
Claim[5] :

59 The channel interlocking method using the multi server of the push stem of claim 3, wherein in the provisional master push server, it continuously continuouslies the circulation work until messages stored in the message queue are altogether processed; and the provisional slave push server repetitively retransmits a message to the case due to the down or the other failure with a timer.

Claim[6] :

62 The computerlegiable medium which appoints the push server in which the channel variation is generated among the regionally independent multi push server as the provisional master push server in the push system equipped with a processor; the provisional master push server continuously transmits the message Naming Alt with the provisional slave push server according to the monitoring result of the second step and the function: function: of watching the message queue in which the provisional master push server is generated as the provisional slave push server in the message queue; and of assigning rest push servers to the provisional slave push server records the program for realizing the function of connecting a channel between the multi push server.


11
웹서버
17
내용제공
12
웹서버
채널등록/수정/삭제
푸시서버 2
ACK, 채널_ID
16
푸시서버 1
13
웹서버
15
서버 관리부
푸시서버 3
18
14
웹서버
푸시서버 4
19


시작
서버관리부를 수행
201
푸시 서버1(임시 마스터 서버)
에서 채널을 등록/수정/삭제
202
푸시 서버2,3,4(임시 슬레이브 서버)
는 명령 메시지의 내용을 해석하여
명령에 따라 채널정보와 서버의
내용을 수정
203
205
푸시서버1에 타이머
동작에 따라 해당
메시지를 푸시서버
2,3,4로 재전송
204
푸시서버
2,3,4는 푸시서버1로
부터 전송된 메시지의
송신결과를
판단?
송신 실패
송신 성공
'ACK'신호를 푸시서버1로 알림
205
207
푸시서버
1에서는 푸시서버2,
3,4로부터 수신된 메시지의
수신여부
판단?
수신 실패
수신 성공
해당 메시지를 메시지 큐(n)에서 삭제
208
209
푸시서버
1의 메시지 큐에 저장된
n개의 메시지를 동일한
수의 푸시서버2,3,4로
전송?
아니오
예
종료